

fact, that whilst the *Ozothallia* and the *Fucus serratus* are very constant in form, the *F. vesiculosus* is extremely polymorphous.

In the higher Cryptogamia the phænomenon of fecundation presents two principal modifications. In the Mosses and Characeæ it takes place in adult plants, and appears to be necessary for the formation of the reproductive bodies; it must consequently be repeated every time that the plant fructifies, and in this respect approaches the process in the phanerogamous plants. In the Equisetaceæ, the Ferns, the Lycopodiaceæ, and the Rhizocarpeæ, fecundation takes place some time after the germination of the spore; its result is the development of the frond which will fructify every year without fresh fecundation. The Fucaceæ present a third modification of the phænomenon, which resembles the second rather than the first, and which has perhaps still more analogy with what takes place in the case of animals. Here it is upon the spore itself that the fecundating action of the antherozoids is exerted, and it is only in consequence of this contact that the spore is developed into a frond capable of fructifying every year without fresh fecundation.—*Comptes Rendus*, April 25, 1853.

TIME OF SPAWNING OF BRITISH CRUSTACEA.

To the Editors of the *Annals of Natural History*.

Weymouth, June 18, 1853.

GENTLEMEN,—I enclose you an addition to my list of the "Time of Spawning of British Crustacea" which appeared in the 'Annals of Nat. Hist.' vol. viii. p. 501.

I wish to draw the attention of your readers to an error in that paper, in which *Crangon bispinosus* is enumerated instead of *Crangon trispinosus*. I have not yet been able to obtain *C. bispinosus*. I am at a loss to conceive how this error could have occurred, as my notes are correct.

I have now succeeded in fixing the dates of carrying spawn of thirty-eight species of British Crustacea, and I have myself obtained at this place fifty-four species, and fully expect to add to that number.

Amongst my latest captures are *Crangon spinosus*, *Hippolyte Whitei* (mihi), *Mysis chameleon*, *Mysis Griffithsiæ*, and one or two species I cannot at present make out.

My dredger is a very clever fellow, and would be pleased to supply anything he might obtain when dredging.

I am, Gentlemen, yours obediently,

WILLIAM THOMPSON.

Species.	Date when found carrying ova.	General Remarks.
<i>Achaus Cranchii</i>	Aug. 18, 1852.	I dredged two in six fathoms, shingle and weedy bottom: one female had two single ova; they are of a deepish yellow colour.

Species.	Date when found carrying ova.	General Remarks.
<i>Crangon fasciatus</i>	June 13, 1853.	I obtained two; one of which was in spawn: ova of a rich brown: this individual was of a darker colour than the other. Caught in three fathoms, sand and shingle.
<i>Crangon spinosus</i>	June 15, 1853.	Two; both in spawn: ova of a dirty white tinged with green. The colour of this shrimp when first caught is very beautiful; it is blotched with claret colour. Dredged in the same locality as the last species.
<i>Crangon sculptus</i>	May 4, 1853.	Three in spawn: ova of a light drab colour. Dredged in six fathoms, shingly bottom.
<i>Crangon trispinosus</i> ...	June 9 & 13, 1853.	I obtained several, most of them being in spawn: the ova are of a light sea-green colour. This is the most numerous of the rarer shrimps. Two to four fathoms, sandy bottom.
<i>Crangon vulgaris</i>	January to July every year.	This species is in spawn all the summer months: I believe they deposit their ova in the month of June: the ova are drab or dirty white. Sandy bottom, from low water to four fathoms.
<i>Cancer Pagurus</i>	March 12, 1853.	In spawn: ova of an orange colour. Caught in a trawl.
<i>Carcinas Mænas</i>	Nov. 23, 1851. March 1, 1853.	In spawn: ova orange-brown.
<i>Eurynome aspera</i>	June 6, 1852.	Two, in spawn: the ova are small, of a lovely bright red transparent coral colour. Dredged in twelve fathoms water, shingly bottom.
<i>Hippolyte Cranchii</i> ...	Aug. 18, 1852.	Several in spawn, in five to seven fathoms water, weedy bottom.
<i>Inachus dorynchus</i> ...	Aug. 18, 1852. May 30, 1853.	I dredged four; one of them carried ova in very small quantity,—the greater portion had evidently been deposited. Those caught in May 30, 1853, carried a quantity of spawn: the ova are large and of an orange-brown colour: the colour of the animal is dingy purple, brighter on the fore part of the carapace. Caught in weedy bottom, six fathoms.

Species.	Date when found carrying ova.	General Remarks.
<i>Stenorhynchus phalangium.</i>	Aug. 18, 1852. May 30, 1853.	In the first, very few ova were left in the purse; in those caught in May 1853, the spawn was so plentiful that the abdomen was thrown back on a plane with the carapace.
<i>Stenorhynchus tenuirostris.</i>	May 30, 1853.	In spawn: ova of a light orange-brown colour: the abdomen in consequence of the large quantity of ova was thrown back on a level with the carapace. This species when alive is of a lovely pink or puce colour. Weedy bottom, three fathoms.
<i>Hippolyte Whitei</i> (mihi)*.	June 14, 1853.	Several in spawn: the ova are palish yellow, but much hidden by the scales of the abdomen. The prevailing colour of this species is meadow green, with (whilst alive) a white band running down the centre of the back. In each there were two teeth on the under edge of the rostrum. Weedy bottom and stones, four to six fathoms.
<i>Hippolyte Thompsoni</i> .	May 4, 1853.	Dredged some in spawn: the ova are of a dirty green. Rocky and weedy bottom, three to five fathoms.
<i>Palæmon Leachii</i>	June 8, 1853.	This is now in spawn; some few have deposited their ova, which are of a brownish drab colour.
<i>Palæmon serratus</i>	June 1853.	All in spawn; it will be deposited before the middle of July.
<i>Mysis vulgaris</i>	June 14, 1853.	In spawn: ova of a brownish colour.
<i>Mysis Griffithsiæ</i>	June 14, 1853.	In spawn.

Experimental Researches on Vegetation. By M. GEORGES VILLE.

After stating that it has often been asked if air, and especially azote, contributes to the nutrition of plants; and, as regards the latter, that this question has always been answered negatively, the author remarks it is however known that plants do not draw all their azote from the soil, the crops produced every year in manured land giving a greater proportion of azote than is contained in the soil itself. The question which he has proposed to himself for so-

* This new and beautiful species of *Hippolyte* I have named after Mr. Adam White of the British Museum. I have drawn up a specific description for the 'Annals' for August.—W. T.